

REMARKS

Rejections under 35 USC §§102(b) and 103(a)

Claims 1, 3 and 5-9 were rejected under 35 USC §102(b) as being anticipated by Loewenhardt et al (U.S. Patent No. 5,942,889). Also, original claim 4, which recited “wherein the probe electrode is made from an optically transparent electroconductive substance,” was rejected under 35 USC §103(a) as being unpatentable over Loewenhardt et al (U.S. Patent No. 5,942,889) in view of Biricik et al (U.S. Patent No. 5,173,443).

Claim 1 has been amended to incorporate the feature of claim 4, “wherein the probe electrode is made of an optically transparent electroconductive substance.”

Loewenhardt et al describes as follows:

The probe 102 is fabricated from electrically conductive material and is attached to the atmospheric (or external) side of the window 106. The probe 102 is connected to a voltage measuring instrument 116 that is capable of measuring either AC (peak-to-peak) or DC (bias level) voltages. **Preferably, the probe is a disk-shaped contact patch with a diameter of 0.25 in (0.635 cm) cut from adhesive-backed copper foil (e.g., 3M product number 1181).**

(Loewenhardt et al, column 2, lines 40-48). According to Loewenhardt et al, the probe is made of copper foil, which is not transparent. The non-transparent probe will obstruct the function of the viewing port. Also, because the probe obstructs the view, the probe must be restricted to a small area. Thus, there is difficulty to secure sufficient sensitivity of the probe.

In contrast, according to the present invention as recited in claim 1, because the probe electrode does not obstruct the view, **the probe electrode can have a sufficient area to achieve high sensitivity.**

Biricik et al has been cited for allegedly disclosing use of transparent conductive windows for allowing viewing as well as shielding from electromagnetic radiation.

Biricik et al describes as follows:

Transparent conductive windows through which optical energy must pass and which have good electrical conductivity have utility in a number of applications. These include resistance heated windows, electro magnetic interference (EMI) shielded windows, anti-static windows and transparent electrodes.

(Biricik et al, column 1, lines 30-35). Biricik et al discusses nothing about a plasma monitoring device. The mere fact that transparent conductive windows have utility in a number of applications does not make every use of transparent conductive windows obvious. There is no suggestion or motivation in the combination of Loewenhardt et al and Biricik et al to modify the disclosure to make into the claimed invention.

For at least these reasons, claim 1, as amended, patentably distinguishes over Loewenhardt et al and Biricik et al. Claims 3 and 5-9, depending from claim 1, also patentably distinguish over Loewenhardt et al and Biricik et al for at least the same reasons.

Claim 2 was rejected under 35 USC §103(a) as being unpatentable over Loewenhardt et al (U.S. Patent No. 5,942,889) in view of Turner et al (U.S. Patent No. 5,576,629).

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Turener et al has been cited for allegedly disclosing electrical sensors being used with amplifiers to amplify signals in order to use for control and monitoring. Such disclosure, however, does not remedy the deficiencies of Loewenhardt et al discussed above.

For at least these reasons, claim 2 patentably distinguishes over Loewenhardt et al and Turner et al.

Claim 4 was rejected under 35 USC §103(a) as being unpatentable over Loewenhardt et al (U.S. Patent No. 5,942,889) in view of Biricik et al (U.S. Patent No. 5,173,443).

This rejection has been already discussed regarding amended claim 1.

Claim 10 was rejected under 35 USC §103(a) as being unpatentable over Loewenhardt et al (U.S. Patent No. 5,942,889) in view of Saito et al (U.S. Patent No. 6,562,186).

Saito et al has been cited for allegedly disclosing a flange to attach the window to the chamber. Such disclosure, however, does not remedy the deficiencies of Loewenhardt et al discussed above.

For at least these reasons, claim 10 patentably distinguishes over Loewenhardt et al and Saito et al.

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New Claims

New claims 11 and 12 have been added. These claims are supported in the specification, because the electromagnetic shielding member is made of ITO, which is an optically transparent material in the embodiments of the present invention.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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